

## Vaginal evisceration after radical hysterectomy and adjuvant radiation

Woo Dae Kang, Seok Mo Kim, Ho Sun Choi

Department of Obstetrics and Gynecology, Chonnam National University Medical School, Gwangju, Korea

Vaginal evisceration is a rare complication after a hysterectomy, especially a radical hysterectomy. Up to now, there have only been three cases of transvaginal evisceration after radical hysterectomy reported in the English literature. We report one case of transvaginal evisceration occurring after radical hysterectomy and adjuvant radiotherapy for stage IIA cervical cancer, with a brief review of the literature.

**Key Words:** Transvaginal evisceration, Radical hysterectomy, Adjuvant radiation

### INTRODUCTION

Transvaginal evisceration is a rare complication after radical hysterectomy and pelvic lymphadenectomy. A MEDLINE search from January 1966 through August 2008 using the key words, "evisceration" and "radical hysterectomy" identified 3 English language articles.<sup>1-3</sup> We report a case of a 40-year old woman who presented with evisceration of the omentum through the vagina 7 years after radical hysterectomy and adjuvant radiotherapy for stage IIA cervical cancer. A vaginal approach was chosen to reduce and repair the evisceration.

### CASE REPORT

A 40-year old gravida 7 para 2 was referred to the emergency room in July 2005 because of severe abdominal pain with protrusion of the omentum through the vagina after straining during defecation. She had undergone a radical hysterectomy and pelvic lymphadenectomy for stage IIA cervical cancer in November 1998. At the time of the radical hysterectomy, the vaginal cuff was closed with interrupted 1-0 Vicryl suture (Ethicon). The retroperitoneum was left open. The final pathologic report revealed invasive squamous cell cancer with evidence of outer 1/3 stromal invasion. After the diagnosis

was made, she was treated with conventional radiation therapy (50.4 Gy by extended beam radiation and 60 Gy by intracavitary radiation).

Examination under anesthesia revealed a 4 cm rupture in the upper posterior wall of the vagina and a 10 cm protruding omentum from the tear. The margin of the vaginal vault dehiscence was atrophic and clear. The prolapsed omentum was edematous and constricted by the vaginal vault orifice.

Copious irrigation of the vagina and pelvis with sterile saline solution was done. The protruding omentum was excised. The bleeding focus of the torn vaginal margins was controlled. A drain was installed into the pelvic cavity through the vaginal cuff. The peritoneum was sewed using a purse string suture with 1-0 Vicryl and the vaginal mucosa was sutured with intermittent 1-0 Vicryl. Intravenous cefazolin was continued after surgery. On the 7th day after the repair of the vaginal cuff, the drain was removed. She had an uneventful postoperative course. A 3-year follow-up examination revealed an asymptomatic patient with a fully healed vaginal scar.

### DISCUSSION

Vaginal evisceration is a rare event and most reported cases and reviews of the literature over the years have been associated with vaginal, rather than abdominal surgery.<sup>4</sup> Indeed, there are only three cases of transvaginal evisceration after radical hysterectomy reported in the English literature.<sup>1-3</sup>

The etiology of vaginal evisceration is obscure, but it has occurred from activity resulting in elevated intra-abdominal pressure. A sudden rupture of the vaginal vault is associated with an acute loss of tensile strength of the peritoneum, fascia, and vaginal mucosa.<sup>5</sup>

There are several factors that may contribute to weakness at

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Address reprint requests to **Ho Sun Choi**

Department of Obstetrics and Gynecology, Chonnam National University Medical School, 8, Hak-dong, Dong-gu, Gwangju 501-757, Korea  
Tel: 82-62-220-6372, Fax: 82-62-227-1637  
E-mail: chs1949@chol.com

the vaginal apex. These are poor surgical technique, postoperative wound or cuff infection, wound hematoma, resumption of sexual activity before complete healing, advanced age, previous radiotherapy, chronic steroid administration, trauma, previous vaginal surgery, and a Valsalva maneuver or straining during bowel movement.<sup>6</sup> The pathophysiology of evisceration after adjuvant radiotherapy is one of a progressive obliterative endarteritis, leading to a hypovascular, hypoxic, and hypocellular tissue bed. Subsequent tissue breakdown may occur spontaneously, particularly when the total radiation dose is high or as a result of direct trauma.

Patients usually present with pelvic or vaginal pain, vaginal bleeding, and the sensation of a mass within the vaginal vault or between the legs.<sup>4</sup> The terminal ileum is most commonly the protruding viscus, although other organs, such as the omentum, salpinx, and epiploic appendices, have also been described.<sup>7-9</sup>

The primary intervention for vaginal evisceration consists of stabilization, fluid therapy, wrapping the bowel with moist saline sponges, early antibiotic therapy, radiographs to exclude foreign bodies, and prompt surgical intervention. The operative treatment of the vaginal vault rupture and evisceration can be performed by either the abdominal or vaginal route, depending on the patient's condition and bowel viability at the time of treatment. If the evisceration is associated with viable, easily reducible bowel, lack of evidence for instrumentation historically and radiographically, the transvaginal approach, consisting of a 2-layer closure of the peritoneum and vagina, should be considered.<sup>7</sup>

Vaginal evisceration is a complication which exists in the field of gynecologic oncology.<sup>1-3</sup> Patients with gynecologic malignancies may be at higher risk for the occurrence of vaginal cuff dehiscence given that the tissue could be involved with tumor, and the tissue vascularity may be compromised secondary to the radical nature of the surgery and the potential use of adjuvant radiation.<sup>10</sup>

Up to now, there have only been three cases of transvaginal evisceration after radical hysterectomy reported, but these pa-

tients did not receive adjuvant radiation therapy. Although, one of the etiologies of vaginal evisceration is previous radiotherapy, this case is the first report of vaginal evisceration after radical hysterectomy and adjuvant radiotherapy. This case suggests that previous radiotherapy is an important risk factor of vaginal evisceration after radical hysterectomy. Although vaginal evisceration is rare, it should be kept in mind that vaginal evisceration may occur when postoperative radiotherapy has been delivered to patients with cervical cancer and high risk factors, such as metastasis to the pelvic lymph nodes, invasion of the paracervical tissue, deep cervical invasion or positive surgical margins.

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